ABSTRACT

The novel binuclear, oxygen-bridged, bimetallic complexes of the general formula (I):

(I) $[(LM^1R^1) (Cp_2M^2R^2)] (\mu-0)$

are suitable as polymerization catalysts for olefin polymerization. ($M^1 = Al$, Ge, Zr, or Ti; $M^2 = Zr$, Ti, or Hf; Cp = cyclopentadienyl; R^1 , $R^2 = H$, methyl, ethyl, ipropyl, t-butyl, halogen, phenyl, alkylphenyl, SiMe3; L = a bidentate, doubly heteroatom-coordinated organic chemical ligand, which together with the metal M^1 forms a 5 or 6-membered ring.) They display very good catalytic activities, good operating lives, and require little cocatalyst.

(Figure 3)